

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appl. 09/647,005
ATTORNEY DOCKET NO. Q60875

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A container having a heterogeneous structure, comprising a material with a barrier effect and a polymer material, wherein the material with a barrier effect is an amorphous carbon material with a polymer tendency which is ^{disposed} ~~applied~~ as a coating on a substrate made of the polymer material. said amorphous carbon material with a polymer tendency contains CH , CH^2 and CH^3 bonds in the proportions of 25, 60 and 15, respectively, and the proportions of the electronic states sp^3 , sp^2 and sp are 53, 45 and 2, respectively.
- 72 (previously presented): A container as claimed in claim 1, wherein the material with a barrier effect is a nano-composite comprising amorphous carbon with a polymer tendency.
- 82 (previously presented): A container as claimed in claim 2, wherein the material with a barrier effect is a nano-composite comprising an amorphous carbon with a polymer tendency and metal atoms.
- 91 (previously presented): A container as claimed in claim 1, wherein the coating of material with the barrier effect is less than about 300 Å thick.
- 105 (previously presented): A container as claimed in claim 4, wherein the coating of material with a barrier effect is between 50 and 1500 Å thick.
- 20 (previously presented): A container as claimed in claim 1, wherein the polymer material is a polyolefin.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. 09/647,005
ATTORNEY DOCKET NO. Q60875

~~37~~ (previously presented): A container as claimed in claim 1, wherein the coating of material with a barrier effect is applied to the substrate inside the container.

~~48~~ (previously presented): A container as claimed in claim 1, wherein the coating of material with a barrier effect is applied to the substrate on the exterior of the container.

~~9-24~~ (canceled).

~~525~~ (previously presented): A container as claimed in claim 1, wherein the container is a bottle or flask.

~~1126~~ (previously presented): A container as claimed in claim 1, wherein the polymer material is a polyester.

~~1227~~ (previously presented): A container as claimed in claim ~~26~~ ¹¹, wherein the polyester is PET.

~~1328~~ (previously presented): A container as claimed in claim ~~26~~ ¹¹, wherein the polyester is PEN.

~~629~~ (previously presented): A container as claimed in claim 1, wherein the material with a barrier effect is applied as a coating on the inner face of said substrate made of the polymer material.